Work Order 1 September-27-13 1:			*10	770	4*					• '	Page 1	
Revision ID:	ring Assembly		Accept ,	*N	1900	<b>040</b>	100	)* s	etup Star Stop	I VI	S1* S2*	
Start Date: 9/2' Required Date: 10/4 Reference:	7/13 Start Qty: 60.00 01/13 Req'd Qty: 60.00				Cust Item I Customer:	D:				r	se <sup>n</sup>	
	rocess Plan:	Date:	Tooling: SPC (Y/N):			ate:		R	un Star Stop	, I.ZI	R1* R2*	
Sequence ID/ Work Center ID	Operation Description		Set Up/ Run Hours		Tool ID	Tool #	Pian Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	
Draw Nbr	Revision Nbr											_
D3121	Rev E				_							_
*100 *100* Hardinge Hardinge CNC Lathe Sm	Hardinge CNC LATH  Memo  all 1-Turn D	E SMALL 3121-25 Cap as per Folio	0.00 0.00 o FA3872-Deburr	OAS 40 9-89	13/6	0/01		60	_Ø			
*110 *110* QC Quality Control	QC2- Inspect parts off	f machine FAI/FAIB	0.00	0AS 40	13/	10/01		60	Ø		. ,	
<sup>120</sup> <b>*12</b> ∩* <sup>QC</sup>	QC8- Inspect parts - s <b>Memo</b>	econd check	0.00	٤. د	13/	10/02	AL.	. 60	<b>4</b>		0As <b>08</b>	

Quality Control

NCR:	Yes	/ No	,			WORK ORDER NON-O	COI	VFOR	MANCE / UPI	DATE			
											QA Closed:	Date	
Work Ord	er: _				·	DISPOSITION	,			AGAINST DE	PARTMENT		
Part I			<u> </u>			Rework Scrap Use-as-is Work Order Update		Thern	Skid-tube  Machining  noforming  Large Fab	Crosstube Small Fab Finishing Composite	-1	Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other
Root	T			•	Descri	tion of work order update	П	nitial	Act	ion	Sign &		
Cause	ļ	Date	Step	Qty	l .	or Non-conformance		ief Eng		iption	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling	П												
Operator	П												
Material	П												
Setup													
Other	П								*				
Process							'						
Supplier						•							
Training							-					,	
Unapproved													
						F.	AUL	T CATE	GORY				
Landi	ng G	ear				General					_		_
		Bending			•	Bend		Grain			Ovalized	L	Pressure/Forced
	Щ°	Centre No	t Concer	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Щ°	Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorred	:t ·	Weld
	Щ°	Crushed/0	Crimped,			Burrs		Instruct	ions Incomplete/U	Jnclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	Ц̈́	Cuffs				Contamination		Mainte	nance		Part Moved		
	<u></u>	leat Trea	t			Countersink		Mislabe	led		Positioned V	Vrong	<b>-</b>
	الل	nspection	Strip in	Tube		Cut Too Short		Misread	1		Power Loss/	Surge	Other
į		Ripples in	Bend			Drill Holes		Offset					
• •	[ ] I	orque W	aves in E	xtrusio	n 🗍	Drawing		Out of 0	Calibration				

Out of Sequence

Outside Dimensions

DQA:

Date: \_\_

Turning Sequence

Wave/Twist in Tube

Finish

•						•							
Work Ord September-27-			Phys. sect. 50.		*107	7704*							Page
Item ID: Revision ID: Item Name:	D3121-241 Bearing Asso				Accept	*N90004	.01	<u>(</u>	<b>)</b> *	-	Start Stop		S1* S2*
Start Date: Required Date Reference:	9/27/13 e: 10/01/13	Start Qty: 60.00 Req'd Qty: 60.00		*60* *60*		Cust Item ID: Customer:							
Approvals:	Process P	lan:	Date:		Tooling:	Date:					Start	*N	R1*
	QC:		Date:_		<b>SPC (Y/N):</b>	Date:					Stop	*N	R2*
Sequence ID/ Work Center	ID.	Operation Description			Set Up/ Run Hours	Tool ID Too		an ode	Accept Qty	Reje Qty		Reject Number	Insp. Stamp
*130* Small Fab		Small Fab  Memo			0.00				60x	<u> </u>			4

140

Small Fab

QC5- Inspect part completeness to step on W/O

0.00

1-Press D3121-23 Bearing into D3121-25 Cap as per Dwg D3121

\*140\*

Memo

0.00

Quality Control

150

Identify as per dwg & Stock Location: 57235 0.00

\*150\*

Packaging

Memo

0.00

60x 3 13-10-3

Packaging

Page 2

60 13.1003

NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UPI	DATE	QA Closed:	Date:	
Work Orde	er: _					DISPOSITION	7		c	AGAINST DE	PARTMENT,		1
Part N	-					Rework Scrap Use-as-is Work Order Update		! Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update		Initial	Act	ion	Sign &		
Cause		Date	Step	Qty	(	or Non-conformance	Ct	nief Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling													
Operator							1						
Material	Ш						Ì		-				
Setup													
Other							ŀ		·				
Process	$\Box$												
Supplier													
Training													
Unapproved													
						F	AUI	LT CATE	GORY				
Landi	ng G	ear				General		-			_		_
		Bending				Bend		Grain			Ovalized	<u>_</u>	Pressure/Forced
		Centre No	t Concer	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Цʻ	Cracks			<u> </u>	Broken/Damaged	L	Inspecti	on Incomplete		Part Incorred	ct	Weld
	Щʻ	Crushed/0	Crimped.			Burrs		Instruct	ions Incomplete/U	Jnclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	<u></u>	Cuffs	m \$4.7			Contamination		Mainte	nance		Part Moved		
		Cuffs Heat Trea				Countersink		Mislabe	led		Positioned V	Vrong	_
		Inspection	strip in	Tube		Cut Too Short		Misreac	I		Power Loss/	Surge	Other
		Ripples in	Bend			Drill Holes		Offset		<del>-</del>			
	-	Torque W	aves in E	xtrusio	n	Drawing		Out of C	Calibration				<del></del>

Out of Sequence

Outside Dimensions

DQA:

Date: \_\_\_

Turning Sequence

Wave/Twist in Tube

Finish

Work Ord September-27-1				*107	7704*							Page 3
Item ID: Revision ID: Item Name:	D3121-241 Bearing Asse	mbly		Accept	*N900	<b>040</b>	100	)*	Setup	Start Stop		S1* S2*
Start Date: Required Date Reference:	9/27/13: 10/01/13	Start Qty: 60.00 Req'd Qty: 60.00	*60* *60*		Cust Item II Customer:	D:	·					
Approvals:	Process Pl	an:	Date:	Tooling: SPC (Y/N):		te:			Run	Start Stop	*NI *NI	R1* R2*
Sequence ID/ Work Center I	D	Operation Description QC21- Final Inspection -	Work Order Release	Set Up/ Run Hours 0.00	Tool ID	Tool#	Plan Code	Accept Qty	Re Qt	,	Reject Number	Insp. Stamp

0.00

Memo

\*160\*

Quality Control

MB-10-4.

NCR: Y	es / No				WORK ORDER NON-C	CON	IFORI	MANCE / UPI		QA Closed:	Date:	
Work Orde	or.				DISPOSITION				AGAINST DEI	PARTMENT	/PROCESS	
Part N	lo				Rework Scrap Use-as-is Work Order Update			Skid-tube  Machining  noforming  Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update	I	nitial	Act	ion	Sign &		
Cause	Date	Step	Qty	(	or Non-conformance	Ch	ief Eng	Descr	ription	Date	Verification	QC Inspector
Doc/Data								·				
Equip/Tooling		İ										
Operator										*		
Material												
Setup										7		
Other								:				
Process												
Supplier	<u></u>			<u> </u>								
Training				<u> </u>								
Unapproved						<u> </u>						<u> </u>
1				-		AUL	T CATE	GORY				
Landir	ng Gear	_			<b>General</b> Bend		Grain			Ovalized	Γ-	]/5
	Bending	s Not Conce	ntric to	O/6	BOM/Route		Hardwa		<u> </u>	Ovalized Over/Under	talaranca	Pressure/Forced Temperature/Cure
<u> </u>	Cracks	Not conce	וונווכ נט	U/3	Broken/Damaged	ш		ire ion Incomplete	<b>—</b>	Part Incorred	<del></del>	Weld
•		d/Crimped		·	Burrs	-		ion incomplete/l		Part Lost/Mi		Wrong Stock Pulled
-	Cuffs	a) Ci iiiipeu	•	-	Contamination	$\overline{}$	Mainte			Part Moved	3311 B	I wrong stock ranea
ŀ	Heat Tr	eat		-	Countersink		Mislabe		<b></b>	Positioned V	Vrong	
ŀ	<del> </del>	on Strip in	Tube	-	Cut Too Short	$\vdash$	Misread		<b> </b>	Power Loss/		Other
Ì	<del></del> ;	in Bend		-	Drill Holes	-	Offset	-	<u>i</u>	1. 5.1.6. 2000/		1
<u> </u>		Waves in I	Extrusio	n	Drawing	$\vdash$		Calibration				
		Sequence			Finish	$\vdash$		Sequence				

Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

September-27-13 1:40:51 PM

Work Order ID:

107704

Parent Item:

D3121-241

Parent Item Name:

Bearing Assembly

**Start Date:** 9/27/13

Required Date: 10/01/13

**Start Qty:** 60.00

Required Qty: 60.00

Comments:

IPP Rev:A04.02.18New issueKJ/DS IPP Rev:B ECN 1060 07-11-12

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MDELRINR1.000		Purchased	No			100	f	23.0000	0.052	3.12	DAS i	. 2 //	. /
Delrin Round Bar 1"											40	13/10	101
				<b>Location</b>		Loc Qty	<u>Lo</u>	c Code			9-89		
				MAT		23							
				7 m12	26794	23			3	25	11	//	
D3121-23		Manufactured	No	·		130	Each	107.0000	1	60	///	In In	7
Bearing									<u> </u>			10/0	
				<b>Location</b>		Loc Qty	<u>Lo</u>	c Code			,		
				ST235		107							
				105	954	93			_60	2			
				667	34	10							
				750	84	2							
				990	000	2							

										DQA:	Date:	
NCR:	Yes / No				WORK ORDER NON-	O	NFORM	MANCE / UPDAT		·		
										QA Closed:	Date:	*
Work Orde					DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Part N	No				Rework Scrap Use-as-is Work Order Update		Therm	Machining S noforming	Finishing composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update		nitial	Action		Sign &		
Cause	Date	Step	Qty	(	or Non-conformance	Ch	nief Eng	Description	on	Date	Verification	QC Inspector
Doc/Data					2 200 1200							
Equip/Tooling												
Operator												
Material												
Setup				,								
Other			ŀ									
Process												
Supplier												
Training												
Unapproved												
					F.	AUL	T CATE	GORY				
Landi	ng Gear				General		_			_		_
	Bending				Bend	<u> </u>	Grain			Ovalized		Pressure/Forced
·	Centre I	Not Conce	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct	Weld
	Crushed	/Crimped	-		Burrs		Instruct	ions Incomplete/Uncle	ear	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cuffs			. [	Contamination		Mainte	nance		Part Moved		-
	Heat Tre	eat			Countersink		Mislabe	led		Positioned V	Vrong	
	Inspecti	on Strip in	Tube		Cut Too Short		Misread	l		Power Loss/	Surge	Other
	Ripples	in Bend			Drill Holes		Offset			-		

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DART AEROSPACE LTD	Work Order:	10144
Description: Cap	Part Number:	D3121-25
Inspection Dwg: D3121 Rev: E		Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.315	+/-0.010	.315			VERN	A-10-12
Ø1.000	+/-0.010	.995	/		14	••
Ø0.838	+/-0.002	. 838			11	
R0.063	+/-0.010	. 063	V		Rad G	
R0.010	+/-0.010	010			, ,	
0.230	+/-0.001	.230 , 865	/		VERN	PC10-12
Ø0.865	+/-0.001	, 8/25			11	1,
		-				
············	- Grand Strange					

	$\mathcal{D}AC$				
Measured by:	40	Audited by: 🖒 👝	080°	Prototype Approval:	N/A
Date:	13/10/01	Date: 13/10/02	9-83	Date:	N/A

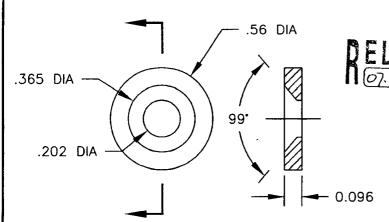
Rev	Date	Change	Revised by	Approved
Α	04.04.20	New Issue (P/O D3121-241)	KJ/RF	
В	06.06.09	Ø1.000 diameter was Ø1.024	KJ/JLM	
С	08.01.16	Dwg Rev. updated	KJ/EC/DD	77

ORDER NON-CONFORMANCE / UPDATE		
(	ORDER NON-CONFORMANCE / UPDATE	CORDER NON-CONFORMANCE / UPDATE

								QA Closed.	Date.	<del> </del>	
er:				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
No			· · · · · · · · · · · · · · · · · · ·	Rework Scrap Use-as-is Work Order Update	The	Skid-tube  Machining ermoforming  Large Fab	Crosstube Small Fab Finishing Composite	4		Engineering Quality Other	
		<u> </u>	Descri	ption of work order update	Initia	Initial Action				<u> </u>	
Da	e Ster	Qty	L	·	1			Date	Verification	QC Inspector	
Unapproved FAULT CATEGORY											
ng Gear				General			<u> </u>	- September			
Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion Turning Sequence				Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing Finish	Hard Inspection Instr Mai Misl Misr Offse Out	ware ection Incomplete uctions Incomplete, ntenance abeled ead et of Calibration of Sequence	'Unclear	Part Incorre Part Lost/M Part Moved Positioned V	ct issing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other	
	Dat  Dat  Dat  Gear  Bendin  Centre  Cracks  Crush  Cuffs  Heat 1  Inspec  Ripple  Torqu  Turnir	Date Step  Date Date Step  Date Step  Date Date Step  Date Date Step  Date Date Date Date Date Date Date Date	Date Step Qty  Date Step Qty  Bending Centre Not Concentric to Cracks Crushed/Crimped. Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusio	Date Step Qty  Date Step Qty  Description  D	Rework Scrap Use-as-is Work Order Update  Date Step Qty Description of work order update or Non-conformance  Fing Gear General  Bending Bending Bend BoM/Route  Centre Not Concentric to O/S BOM/Route  Cracks Broken/Damaged  Crushed/Crimped Burrs  Cuffs Contamination  Heat Treat Countersink  Inspection Strip in Tube Ripples in Bend Cut Too Short  Ripples in Bend Drawing  Torque Waves in Extrusion Turning Sequence Finish	Rework Scrap Use-as-is Work Order Update Initia  Date Step Qty Or Non-conformance Chief E  FAULT CA  Regear General  Bending Bend Grai  Centre Not Concentric to O/S BOM/Route Hard  Cracks Broken/Damaged Inspectors  Crushed/Crimped Burrs Instruction  Cuffs Contamination Mail  Heat Treat Countersink Mislands Inspection Strip in Tube Cut Too Short Misr  Ripples in Bend Drawing Counter  Ripples in Bend Drawing Counter  Turning Sequence Finish Counter  Turning Sequence Finish	Rework Scrap Use-as-is Work Order Update Use-as-is Work Order Update Large Fab Use-as-is Work Order Update Chief Eng Description of work order update or Non-conformance Chief Eng Description of Work Order Update Chief Eng Description of Work Order Update Chief Eng Description of Work Order update or Non-conformance Chief Eng Description of Work Order Update Chief Eng Description Order English Maintenance Instruction Incomplete Inspection Incomplete Instructions Incomplete Instruction Incomplete Instruction Incomplete Inspection Strip in Tube Countersink Maintenance Mislabeled Inspection Strip in Tube Countersink Misread Offset Order Incomplete Inspection Strip in Tube Countersink Misread Offset Inspection Strip in Tube Countersink Dirawing Out of Calibration Out of Sequence Finish Out of Sequence	Rework Scrap Use-as-is Work Order Update Use-as-is Large Fab Composite    Date   Step   Qty   Description of work order update or Non-conformance   Chief Eng   Description	Rework Scrap Use-as-is Work Order Update Use-as-is Date Step Qty Or Non-conformance Chief Eng Description Date    Date   Step   Qty   Or Non-conformance   Chief Eng   Description   Date	Rework Scrap Use-as-is Work Order Update Institute In Step Otty Order Order Update Inspection Incomplete Inspe	

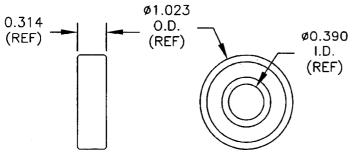


DESIGN	DRAWN BY		EROSPACE LTD BURY, ONTARIO, CANADA
CHECKED	APPROVED /	DRAWING NO.	REV. E
#	#	D3121	SHEET 10 OF 10
DATE	<del> </del>	TITLE	SCALE
07.11.07		BRACKET ASSEM	BLY 1:1



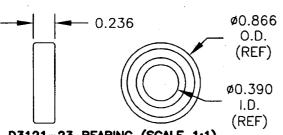
#### D3121-17 WASHER (SCALE 2:1)

- 1) REPLACES PREMIER P/N B32-23001-17
- 2) MATERIAL: AISI 303 SS ROUND BAR, ANNEALED (REF DART SPEC. M303R)
- 3) TOLERANCÈS ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015



### D3121-19 BEARING (SCALE 1:1)

- 1) POSSIBLE SUPPLIER: KING BEARING P/N 6000-2ZJ/EM FAFNIR P/N 9100KDD
- 2) ALL DIMENSIONS ARE IN INCHES



D3121-23 BEARING (SCALE 1:1)

- 1) POSSIBLE SUPPLIER: SKF P/N 61900-2Z OR KML P/N 6900-ZZ
- ARE IN INCHES ALL DIMENSIONS

# D3121-21 BOLT (SCALE 1:1)

- 1) MATERIAL: AISI 303 SS HEX, ANNEALED (REF DART SPEC. M303H0.500)
- 2) FINISH: NONE

0.375

3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

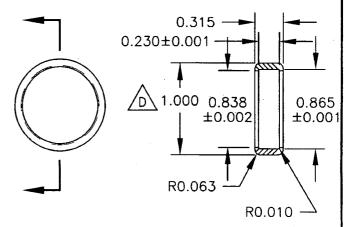
TAP 10-32

UNF-3A

- 0.050 TO 0.060

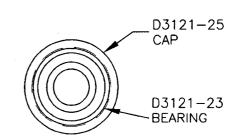
- 0.080

- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015



#### D3121-25 CAP (SCALE 1:1)

- 1) MATERIAL: DELRIN ROD, Ø1.25
  - (REF DART SPEC. M-DELRIN-R1.250)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES



D3121-241 BEARING ASSEBLY (SCALE 1:1)

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	· ·	DQA:	Date:	
NCR· Yes / No	WORK ORDER NON-CONFORMANCE / LIPDATE			

									QA Closed:	Date:		
Work Orde	Order: DISPOSITION AGAINST DEPARTMENT/PROCESS							/PROCESS	·			
Part No.  NCR No.					Rework Scrap Use-as-is Work Order Update	<b>⊣</b> !	Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Large Fab Composite			Prod. Eng. Coor. Qualit Rec/Store/Packaging Othe		
Root				Descri	iption of work order update	Initial	Initial Action Sign &					
Cause	Date	Step	Qty		or Non-conformance	Chief Eng	Descr	ription	Date	Verification	QC Inspector	
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training												
Unapproved		<u> </u>	L			AULT CATE	GORY		<u> </u>		<u>                                     </u>	
Landing	g Gear				General	7.02. 07.1.2						
	Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend				Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes	Grain  Hardware  Inspection Incomplete  Instructions Incomplete/Unclear  Maintenance  Mislabeled  Misread  Offset			Ovalized Over/Under tolerance Part Incorrect Part Lost/Missing Part Moved Positioned Wrong Power Loss/Surge		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other	
Ļ			ves in Extrusion Drawing				Calibration			<u> </u>		
-	Turning Sequence Finish  Wave/Twist in Tube Folio				=	$\vdash$	Sequence • Dimensions					

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